THE RAILWAY PROBLEM—DISCUSSION[1]

SAMUEL O. DUNN.—My assignment is to discuss the Plumb plan in its relation to efficiency of railroad operation.

Efficiency of operation consists in running a railroad as economically as is compatible with paying reasonable wages to employees and rendering good service to the public. It would be impossible within the time at my disposal to discuss the Plumb plan in relation both to the effects it seems to me it would have upon the quality of the railroad service rendered and those it would have upon the cost of providing the service. Therefore, I shall confine myself to the discussion of its probable effects upon the cost of providing the service.

The same limitation of time will make it necessary for me to assume that we are trying to decide merely between private management, on the one side, and management under the Plumb plan, on the other. Many persons believe that government management would in the long run be superior to either private management or the Plumb plan; but time will not permit me to touch upon government management.

The efficiency with which a railroad system is operated depends, first, upon brains; second, upon capital, as represented chiefly by the physical facilities provided; and, third, upon manual labor.

The most important of these is brains. Some people seem to think that after a railroad is built and running its efficient operation becomes more or less a matter of routine. The truth is, there never was a time in the history of the United States when its railroads were confronted with so many problems the solution of which will require foresight, initiative, courage, and administrative capacity of the highest order as now. The productive capacity of the country has outgrown the carrying capacity of the railroads. There can be no further substantial increase of production until the capacity of the railways has been substantially increased. The welfare of the nation demands that this increase of transportation capacity shall be obtained at the least practicable cost; and it will require ability of a high order to do this.

Again, there has been an enormous increase in the cost of operation within recent years, owing mainly to advances in the prices of materials, equipment and fuel, and to advances in the wages and reductions in the working hours of labor. Labor already is asking for still further large advances in wages. To reduce the cost of operation substantially,—or, if there are to be any more advances in wages and prices, to keep it from advancing still further,—will also require the exercise of great ability and energy. The best brains available will be required to raise capital on the best practicable terms and to see that it is invested where it will do the most good. They will also be needed to devise and put into effect the operating methods needed to enable the railways to make the best possible use of their facilities,

[1] The discussion of the railway problem was opened by an address by Mr. Glenn E. Plumb. Mr. Plumb was not able to furnish a manuscript of his address, and it is therefore, with regret, omitted from the PROCEEDINGS.

thereby transporting the maximum practicable traffic while giving the best practicable service at the least practicable cost.

For the purposes of discussion we distinguish between brains and labor. But there is no labor so painful and exhausting as the hard and prolonged use of the brain; and on the other hand most manual labor is valuable in proportion not merely to the physical exertion but also to the intelligence of those who perform it. There is an immense amount of latent brain power among the railway employees of this country. This is illustrated by the fact that a large majority of the great railway managers have risen from the ranks of the employees. But while intelligence on the part of labor is essential to its greatest efficiency, that intelligence on the part of labor is not necessarily accompanied by the power of initiative, but is chiefly valuable because it enables labor to do better the tasks assigned by those who work chiefly with their brains. Therefore, in a broad way, the distinction between brains and labor is valid.

Transportation costs are of two kinds, capital costs and operating costs. These two kinds of costs are often discussed as if they are independent of each other. In fact, they are interdependent. The operating costs of every railroad system are determined very largely by the amount of capital that has been invested in it and the way it has been invested. The first requisite to efficient operation is the raising and the wise investment of sufficient capital to provide facilities enough to handle the available traffic. Traffic, and especially freight traffic, can be most economically handled in large units; that is, in large cars and in long trains. In order that freight may be handled in large units it is necessary not only to provide large cars and to equip them so that they can be handled in long trains, but also to reduce the grades of the tracks and eliminate the curvature from them, and moreover to provide the right kind of power for moving long trains. This power may be large and heavy steam locomotives, or it may take the form of electrical installations and locomotives. As the traffic grows, and the size of carloads and trainloads increases, there must be provided sufficient second, third, fourth, and even additional tracks, long passing tracks, large yards and terminals, etc. Without sufficient facilities of these kinds economical operation is impossible. The determination of what improvements in, and additions to, the physical facilities shall be made requires engineering, operating, and executive ability of the highest order. Increased investment means that increased fixed charges must be paid. The object always is to effect a reduction of operating expenses which will exceed the interest and dividends that must be paid upon the increased investment. If this object is not attained the additional investment made will cause a loss instead of a gain to the owners of the railroads.

Once the improved and additional facilities have been provided there remains to be solved the problem of so operating the railroads as to make the most efficient possible use of their facilities. The solution of this problem is hardly less difficult than that of investing capi-

tal in such a way as to provide just the kind of facilities needed. The operating organization of a railroad system is very large, and includes a great majority of all its officers and employees. It maintains and keeps in running order the locomotives and cars; it maintains the tracks and permanent structures of all kinds; it works out all the train schedules, and makes up, runs, and breaks up all the trains; it loads and unloads all the less-than-carload freight traffic; it manages all the freight and passenger stations. The efficient operation of a large railroad is an administrative task of gigantic proportions which requires as great ability as any administrative task in industry.

It is claimed that under the Plumb plan the efficiency with which our railroads are operated would be increased. It also has been claimed that under private management our railroads have been inefficiently operated. There are two kinds of comparisons which could be made to determine whether they were inefficiently operated under private managment.

First, the conditions surrounding them and the operating results obtained could be compared with those of railways in other countries. This, however, would take much time and, of course, I shall not undertake it here, although I have done so elsewhere. It will have to suffice to say, what every student of railway management knows, that our railways have handled their traffic at lower unit costs and at relatively lower rates than any other railroads.

Secondly, we may compare the conditions surrounding, and the operating results of, our railways in the last year of private operation, 1917 for example, with those of some earlier year, as 1907. If we find that their operating results when private operation was terminated were greatly superior to what they were, say, ten years before, this will throw some light on whether they were efficiently managed during those ten years. If the operating results of an individual railroad, or a railroad system, are constantly improving this affords very good ground for contending that it is being efficiently managed.

I believe that the best standard for determining whether a concern or an industry is being efficiently managed is the extent to which the service rendered or the product made by it is increasing or decreasing in proportion to the amount of human labor used. From an economic standpoint the main thing which all men want is either an increase in the necessities, comforts, and luxuries which they receive for the work they do, or a reduction in the amount of work they have to do in order to get the necessities, comforts, and luxuries which they receive. There is only one way in which mankind as a whole, or the people of any country as a whole, can get more necessities, comforts, and luxuries than they now get for the same work, or the same necessities, comforts, and luxuries for less work, and that is by increasing the amount of these things produced in proportion to the amount of human labor used in producing them. Now transportation is one of the most essential factors in modern production; and the fewer men there are employed in furnishing adequate transportation for the country's commerce, the

more there will be that can be employed in the industries that produce the things that enter into that commerce, and, therefore, other things being equal, the more things there will be produced in proportion to the total amount of work done.

The year ended on June 30, 1907, and the year ended on December 31, 1917, were both years of record-breaking railroad traffic. Therefore, it is fair to compare the operating results of the railroads in those two years. They met certain great difficulties in handling their business in the latter part of 1917 owing to complications created by the war, but our comparisons will not be vitiated by ignoring these. The units of railroad service are the ton carried one mile and the passenger carried one mile. In 1907 the number of passengers carried one mile for each person employed on the railroads was 16,577, while in 1917 it was 22,781, an increase of 37 per cent. The number of tons carried one mile per employee in 1907 was 141,501, while in 1917 it was 227,636, an increase of 61 per cent. There were no substantial changes between these years in the hours of work or the hardships endured by employees, and therefore these statistics faithfully reflect the increase which was made in the amount of transportation service rendered in proportion to the amount of human labor used.

How was this great increase in the amount of transportation service rendered in proportion to the amount of human labor performed obtained? It was obtained mainly in the ways that I have already intimated, namely: first, by the investment of capital to provide additional and better facilities; and, second, by the adoption of improved operating methods.

In 1907 the book cost of road and equipment of the railroads per employee, as reported to the Interstate Commerce Commission, was $7792, while in 1917 it was $10,631. Many criticisms have been passed upon the statistics of book cost of road and equipment upon the ground that, especially prior to 1907, they have not represented actual investment. It is generally conceded, however, that the reports since 1907 have represented actual investment, and if this is the case there was made in the ten years ended with 1917 an investment of almost $3000 for every person employed. For that amount of money you could buy, until recent advances in price, a Marmon or a Packard automobile. I use that illustration to show how large and valuable was the addition made in those ten years to the facilities that were provided by railroad capital and brains in order to increase the amount of transportation service that could be rendered with a given expenditure of human labor.

The results of the investment of this new capital and of the improvements which were made in operating methods are shown by the statistics of the Interstate Commerce Commission. The average capacity of freight cars was increased from 34 tons to almost 39 tons. The average tractive power of locomotives was increased from 25,823 pounds to 33,932 pounds. The average tons hauled per car was increased from almost 20 tons to almost 25 tons. The average number

of tons hauled per train was increased from 357 tons to 597 tons, or 67 per cent.

I suppose it is hardly necessary to present any argument to demonstrate that this increase of railroad operating efficiency was not due mainly, or even largely, to manual labor. There is very good reason for believing that the average railroad employee actually did not do as much hard manual labor in 1917 as he did in 1907, although he may have had to use more intelligence. This increase of efficiency was due almost entirely to the investment of capital and to the use by the directors and officers of the companies of their brains.

Perhaps it may be suggested that this large increase of investment was accompanied by a large increase in the return which had to be paid to capital in proportion to the amount of business moved, and that this kept down the wages of labor. On the contrary, the average wage per employee increased from $641 in 1907 to $1003 in 1917, or over 56 per cent. I do not contend that the wages paid to railway employees were sufficient, but I do contend that the fact that this large increase in wages was not accompanied by any advances, but by actual declines, in the average rates charged to the public, and that nevertheless most of the railroads remained solvent, makes it evidence of efficient operation. Meantime, the return paid to capital in proportion to the amount of traffic handled actually declined; or, to state the matter another way, the amount of traffic handled increased more in proportion than the interest and dividends which were paid. In 1907 the number of passengers moved one mile for each dollar of interest and dividends paid was 48, while in 1917 it was 51, an increase of 6 per cent. In 1907 the number of tons of freight carried one mile for each dollar of interest and dividends paid was 416, while in 1917 it was 512, an increase of 23 per cent. In spite of the advance of 56 per cent in the average wage of railroad labor the increase in the efficiency of operation was so great that in 1917 the amount of traffic handled for each dollar of wages paid was about the same as in 1907. The number of passengers carried one mile for each dollar of wages paid in 1907 was 25, while in 1917 it was 22, a small decrease. The number of tons of freight moved one mile for each dollar of wages paid in 1907 was 211, while in 1917 it was 226, a small increase. Not only did the amount of interest and dividends paid increase relatively less during this period, in spite of the large increase in investment, than did the traffic handled, but there was also a decline in the percentage of return earned upon the nominal investment. The average return earned on the book cost of road and equipment in 1907 was 5.61 per cent, while according to the latest statistics of the Interstate Commerce Commission in 1917 it was only 5.39 per cent. The statistics demonstrate not only that there was a great increase of efficiency but that labor benefited more in proportion by it than did capital.

The organizations by which these operating results were obtained under private management are familiar to all. First, there is the board of directors, which usually is composed of bankers, railway

officers, and other business men. It chooses a chairman, who is the chief financial officer of the company, and a president, who is its chief administrative officer. Often the same man is both chairman and president. The other principal officers of the company are appointed by the board on the recommendation of the president. The higher officers of our railroads almost invariably have risen from the ranks. In no other business in the world have promotions been so nearly uniformly based on experience and proved ability. The higher officers have selected the other officers, and in their cases also appointments or promotions almost always have been based on experience and proved ability.

What is the organization which Mr. Plumb proposes to set up in place of this? First, there is to be a board of fifteen directors, one third of whom will be appointed by the President of the United States, one third by the railway officers, and one third by the employees. The officers will be merely employees, and therefore two thirds of the directors will be elected by the employees. It is easy to criticise the personnel of the present boards of directors, but at least they usually have been composed of able and experienced business men who have been stockholders, who have taken some pains to know something about the conditions and the needs of the railroads of which they have been directors, and who have had a strong incentive to try to cause the railways to be efficiently operated. Is it logical to assume that the board of directors which Mr. Plumb proposes shall be created for all the railways would have as well qualified a personnel as the present boards? If we may judge by our past governmental experience, will the directors appointed by the President be able and experienced business men or able and experienced railroad men? How are the 20,000 railway officers, who are scattered all over the United States, and rank all the way from trainmasters and roadmasters to presidents, to be able intelligently to select five men who will be especially qualified to serve as directors? How are the railroad employees who are scattered all over the United States, and are of all ranks from section laborers who cannot speak English to locomotive engineers, intelligently to select five employees who will be especially qualified to serve as directors? It seems not unreasonable to conclude that the President will appoint directors for political reasons and that the employees will elect labor leaders. Most politicians and labor leaders would have few qualifications for directors.

Besides, this board must direct the operation of all the railways of the United States. Where could you find fifteen men who would know, or who could learn, enough about all the railroads of the United States intelligently to direct the operation of all of them and who would accept appointments or election?

The Plumb plan provides in addition that the railways may be divided into districts and district railway councils created, one third of whose members shall be appointed by the board of directors, one third by the railway officers in the district, and one third by the em-

ployees in the district. What kind of system of election could be devised which would give any reasonable assurance that the personnel of these councils would be competent? And yet to them the board of directors may delegate the exercise of all of its authority that it sees fit.

The board of directors of a corporation, after having selected its executive officers, becomes mainly a legislative body. The administration of the business is left in the hands of the executive officers, and therefore the success of the management depends almost entirely upon whether able or incapable administrators are selected. It requires ability to recognize ability. Would a board of directors and district railway councils thus constituted select as fit men to manage the railways as have been selected under private ownership? Would they give them a free hand in selecting their subordinates, in determining when and how new capital should be invested, what operating policies should be adopted, and how the discipline of employees should be carried out? I think I know the answers to these questions and I think you know them. The executive officers selected almost certainly would not be as able men as those who have been selected under private management, and they almost certainly would not be free from meddlesome interference by the board of directors and especially by the district railway councils. But every one familiar with railroad management, or any other kind of business management, knows that the best plans for the investment of capital and for the operation of a property, and the initiative and energy necessary for carrying them out, are and can be furnished by only a relatively few men, and that therefore the results gained depend mainly upon the opportunity and freedom of action accorded to those men. Men of ideas and initiative will not go into or stay in any business where they do not have opportunity to use their abilities. The Plumb plan would speedily drive men of ability out of the railroad business and prevent other men of ability from going into it. The railroad organization under it rapidly would become an organization with a greatly reduced amount of brains.

As I have pointed out, the raising and wise investment of adequate capital is one of the principal essentials to efficient operation. There is nothing in the Sims bill, which has been introduced in Congress at the request of advocates of the Plumb plan, which provides, so far as I can find, for the raising of the vast amounts of new capital which must be invested year by year to secure the rendering of transportation at the lowest practicable economic cost. It could not be provided from net earnings, for the amount of new capital required by the railroads annually has often in the past, and will often in the future, exceed their annual net earnings. Much the greater part of the new capital would have to be raised, if raised at all, by the issuance and sale of government bonds. This would have to be provided for by Congress. What kind of fight do you think there would be in Congress every year when the board of directors went to it and asked it to provide for an issue of one or two billions of dollars in bonds, the

receipts from the sale of which were to be spent in ways about which Congress would have absolutely nothing to say? I cannot conceive that Congress would provide the needed capital, and therefore I cannot conceive that the improvements needed to secure the most economical operation of the railroads would be made. Even if Congress did find the money, it requires brains as well as money to make adequate improvements in the right way, and the necessary brains, for reasons I have stated, would not be forthcoming under the Plumb plan.

But, it is said, great economics would be effected by unified operation. The Director General of Railroads, Mr. Hines, speaking from an experience which probably qualifies him to speak as authoritatively as anybody, has stated that practically all the benefits that can be derived from unified operation already have been secured under government control. I believe that statement is correct. I always did think that the benefits that could be derived from unification were enormously exaggerated, while the losses it would cause were usually minimized or disregarded; and our experience with government operation has confirmed that view. As I have already pointed out, the great economies always have been obtained by handling traffic in larger and larger units. This handling of traffic in large units, as I have pointed out, has been obtained partly by large capital expenditures and partly by improved operating methods. The railroad labor organizations would be extremely influential under the Plumb plan; and the four most powerful labor organizations for years have resisted the increasing of trainloads. Largely to defeat the main effect of increasing trainloads, which is to reduce the number of men required to handle a given amount of traffic, they got many state laws passed to increase the number of men that must be employed in a train crew. Later they tried to get legislation passed to limit a freight train arbitrarily to fifty cars. They have also tried to get other measures adopted for the purpose of preventing the railways from using operating methods intended to reduce the nmber of men required to handle a given amount of traffic.

Wages constitute about 60 per cent of railroad operating expenses. How are you going to reduce the labor cost of transportation without either reducing wages or increasing the amount of traffic handled in proportion to the number of men employed? The second largest item of railroad expenses is the cost of fuel. The most effective way to reduce the amount of fuel consumed in proportion to the amount of traffic handled is to increase the size of the carload and trainload in which traffic is handled. How are you going substantially to reduce the fuel bill unless you increase the size of the units in which traffic is handled? The cost of labor and of fuel combined constitutes about 80 per cent of the operating expenses of the railroads, the remaining expenses being incurred chiefly in the purchase of materials and supplies. How could any substantial reduction of operating expenses be made under the Plumb plan or any other plan if employees success-

fully resisted the adoption of measures to reduce the labor bill and the fuel bill?

But, it is said, under the Plumb plan the officers and employees would have a powerful incentive to reduce expenses because they would get one half of any surplus that was earned. I could give some very good reasons for believing that no surplus would be earned. One of these is that salaries and wages would be fixed by a board composed entirely of representatives of the officers and employees, and I believe officers and employees would have a much more powerful incentive to raise their salaries and wages, all of which would go to them, than to try to earn a surplus, only one half of which would go to them. Even if it were certain there would be a surplus to be divided, I do not believe that would have any considerable effect upon efficiency. For reasons I have pointed out, there would not be as much brains distributed among railway officers as there are now, and the best intentions and the most laborious effort never have been and never will be a good substitute for brains.

As to the employees, I do not believe that average human nature will be changed, or average human intelligence very greatly increased over night, by the adoption of the Plumb plan. Now, the average human nature and the average human intelligence represented by railroad employees takes the view today, first, that no individual man is going to gain much by exerting himself especially to increase railroad efficiency or the total national production, and, second, that if the workers work especially hard they may exhaust the available supply of work and thereby put themselves out of their jobs. These are not sound economic views, but they are the views that the average railroad employee now takes and which his union sedulously encourages him to take. It is the view that the average railroad employee would doubtless continue to take after the adoption of the Plumb plan, and obviously the adoption of the Plumb plan would give a better opportunity to put such views into force. Besides, the effectiveness of manual labor is dependent chiefly upon the kind of physical facilities provided for it to work with, and upon the amount of brain power employed in its direction and upon the extent to which that brain power is able to direct what the laborer does. There would be no such improvements in the physical facilities of the railroads under the Plumb plan as there have been in the past. The amount of brains devoted to the direction of railroad labor would be less than it has been in the past; and from the very nature of the Plumb plan it would be impossible for the brains of the railroad business to exercise such control over the labor employed in it as has been the case in the past.

My reasoning may be wholly incorrect, but if it is anywhere near correct the conclusion necessarily follows that the adoption of the Plumb plan would result in a speedy, permanent, and very great reduction in the efficiency of railroad operation. The private management of railroads has been very imperfect, and I believe it is entirely feasible to work out some plan under which the brains, the capital, and

the manual labor in the industry can and will coöperate in such a way as to produce much better results for all concerned, including the public, than they have in the past. But I believe that this coöperation must be brought about, if at all, first, under private ownership and management, and, second, under some system which will bring those who furnish the capital, those who furnish the brains, and those who furnish the labor to a realization of the fact that it is just as essential to the welfare of each of them to increase the amount of transportation service rendered in proportion to the amount of human labor used as it is to secure an equitable division of the earnings made in rendering transportation service. Transportation is one of the essential factors in production; production must precede the division of what is produced among those who produce it; and no system will long be of any benefit to labor which does not provide as adequately for securing efficiency in production as for securing equity in distribution.

PIERPONT V. DAVIS.—The objections to government ownership were succinctly stated by President Hadley, thirty-five years ago, and the accumulated experience of the world since has reaffirmed the cogency of his analysis. The impartial testimony of the British expert, Mr. Acworth, before the Newlands Committee in 1917, is convincing that, whatever the theoretical advantages of government ownership may be, in practice democratic governments fail to secure them.

The author of the Plumb plan confesses the weight and merit of the charge that public operation does not promote efficiency and does promote habitual carelessness in regard to expenditures.[1] He therefore proposes government ownership mitigated by employee operation, and seeks popular support by the seductive promise that the adoption of his plan, which would make possible railway rate reductions, would thereby cut the high cost of living. Most of us will agree, I am sure, that no considerable reduction in living costs is possible until production overtakes consumption throughout the world, and critical students of the subject have concluded that the cost of transportation bears little relation to the price the consumer pays.[2]

But I am not going to discuss directly the effects which the adoption of the Plumb plan may have on the cost of living. I wish to examine the theory that it will reduce the cost of transportation. This theory rests on two primary assumptions: first, that the utilization of

[1] *Hearings on Extension of Government Control of Railroads*, Senate Committee on Interstate Commerce, 65th Congress, p. 996.

[2] Interesting figures in this connection were prepared by Mr. Julius Kruttschnitt, President of the Southern Pacific Company, for Representative Esch. In 1914, the average value of freight carried by the railroads was $56 a ton, while the average cost of transporting it was $2 a ton. In 1919, the average value was $119 a ton, while the freight rate was $2.80. Thus, five years ago, 3.6 per cent of the total cost was spent on transportation, while at the present time, only 2.4 per cent is so spent. The cost of the commodity per ton increased $63, while the railroad received only 80 cents more. In other words, 1.3 cents out of every dollar of the increase in value of commodities in 1919 was caused by increased freight rates. The responsibility for the remaining 98.7 cents out of every dollar must be sought elsewhere.

government credit will permit the raising of money at rates from 25 per cent to 50 per cent lower than private corporations can borrow funds; second, that as the property investment accounts of the railways do not accurately reflect real value, fictitious capitalization now demanding a return will be eliminated.[3]

The transportation bill of the country is at the present time somewhat in excess of five billion dollars a year, and is composed of just two items: (1) the charge for maintenance, operation, and taxes; (2) the charge for capital.

In 1919 the charge for operation included three billion dollars paid as wages to labor, and $550,000,000 paid as compensation to capital. Capital is guaranteed during federal control some $900,000,000 a year, but since the railways failed to earn this amount by $450,000,000, the deficiency has been met by the taxpayer and not by the shipper and traveller. Since it is unlikely that there will be any immediate decrease in the cost of supplies, and since there is certainly no probability of a reduction in wages, it would appear that any reduction in the transportation bill is to be accomplished by reducing exclusively the compensation now paid to capital.

Let us consider first how much the compensation to capital can be reduced by means of the substitution of government credit for private credit.

Under the power of eminent domain, the United States can condemn the railroads which serve as instruments of interstate commerce, but, upon condemnation, the owners of the properties must receive just compensation, which would have to be paid in cash unless the owners were willing to accept something else. They cannot, for example, be compelled to accept a 4 per cent government bond at par as the equivalent of cash. Doubtless, many holders of railroad securities would be willing to exchange for government bonds bearing a fair rate of interest, but cash, probably to the amount of five or ten billion dollars, must be provided if demanded. Could the money be raised, and if so, at what price?

The market for government bonds is already glutted. The Federal Reserve Board has recently estimated that of the loans placed during the war from six to eight billions still remain undigested by investors. Certain Liberty issues having some tax exemptions are now selling to yield over 5.15 per cent. As a practical matter, I believe it would be impossible for the government under existing conditions, to sell a great volume of its long term bonds on better than a 5½ per cent basis. Of course, a tax-free bond could be sold at a much lower rate, but further issues of tax-free bonds are contrary to the interests and, I believe, the desire of the country. Because railroad securities lie at the heart of the credit fabric of the country, I am convinced that, unless the just compensation paid the owners of railroads is far greater than Mr. Plumb is disposed to grant, it would be impossible for the government to sell its bonds in quantity at any price.

[3] *Hearings on Extension of Government Control of Railroads*, Senate Committee on Interstate Commerce, 65th Congress, p. 1013.

Assuming, for the moment, that the cost of acquiring the railroads equals their present book value,—namely, $18,500,000,000,—interest at 5½ per cent calls for $1,017,500,000, which is more than $100,000,-000 in excess of the standard return payable during federal control.

But Mr. Plumb says he believes the roads are worth only ten or twelve billion dollars. Assuming that he is right and the purchase price is twelve billions, $660,000,000 would be the yearly interest charge at 5½ per cent, to which we must add $120,000,000 for the 1 per cent sinking fund contemplated in this plan,—a total of $780,-000,000, compared with the standard return of $900,000,000. But since the roads are showing a net operating income of only $550,000,-000, even the adoption of the Plumb plan would not obviate the necessity for an increase in rates.

Unless the railroads can be acquired for some amount far less than their capitalization, there will be little, if any, savings as a result of the substitution of government credit for private credit, and one major hypothesis of the Plumb plan breaks down.

Even if much greater savings could be demonstrated, the wisdom of calling upon government credit is extremely questionable. "We must remember," I quote from Hon. Paul M. Warburg, "that the excessive use of the government's credit tends to increase the rate at which a government borrows. With us it would not only affect the rate of the government bonds to be issued in refinancing the outstanding railroad securities, but it would add to the rate to be paid by our government when some of our Liberty Loans in due course will mature and come up for renewal."[4]

I now come to the consideration of the possibility of reducing the charge for capital by eliminating "water" in railway capitalization. Here, Mr. Plumb assures us, huge savings can be secured since, he avers, there is at least eight billion dollars of "water" in railroad securities which can be expunged.[5] But Mr. Timothy Shea, head of one of the great Brotherhoods, in a recent address, apparently foresees an obstacle to the easy confiscation of other people's money. He said:[6]

> Justice must be done to those who represent capital invested in the transportation industry. . . . There should be no confiscation of investment values, or rigid adherence to any theory of valuation which, while logically correct, would result in loss and injustice. . . . The labor organizations in putting forth the so-called Plumb plan, have been accused of attempting to confiscate the property of innocent persons without due process of law by failing to distinguish between those who have been responsible for improper methods of railroad finance and the holders of securities which have been improperly issued as a result of those methods. Nothing could be farther from the truth.

Taken at its face value, this statement might be interpreted as a bid to attract the support of investors for the Plumb plan. Perhaps there is no real difference between the views of Mr. Shea and Mr. Plumb; but I am reminded of Lord Salisbury's criticism of the socialists—

[4] Address before New York Chamber of Commerce, Feb. 6, 1919.
[5] *Hearings before House Committee on H. R. 4378,* pp. 638, 639.
[6] Before Academy of Political Science, New York, Nov. 21, 1919.

"Where they are precise they are not agreed, and where they are agreed they are not precise."

Whether the present depressed market values led Mr. Plumb to the assumption that there is eight billions of "water" in railway capitalization, I do not know; however, it is absurd to claim that the present market value of railway stocks and bonds is any index to the real value of the properties.

Since it is essential for the Plumb plan to demonstrate that great savings can be made, it is obviously necessary that its author shall construct a theory of valuation which will eliminate as many elements of value as possible, without regard to the rights of investors or its effect on the credit fabric of the country or judicial decisions to the contrary.

This ingenious theory proceeds as follows: since a railroad corporation exercises delegated governmental functions and takes all of its rights, powers, and privileges subject to the limitations imposed under the laws under which it is created, such corporation cannot claim against the public, its grantor, any rights, properties, and franchises not expressly conferred by its charter, or the laws under which it operates.[7]

The practical application of this theory of valuation is to deny to railway corporations any compensation for (1) properties acquired through the application of surplus earnings, and (2) increases in the value of lands or other property owned.

But it has been established judicially that original cost and present value are not equivalent terms,[8] and in the Minnesota Rate Cases, the Supreme Court said, "The property is held under private ownership and it is that property and not the original cost of it of which the owner may not be deprived without due process of law." The Court further said that the corporation is entitled to "a fair return upon a reasonable value of the property at the time it is being used for the public" and that "in ascertaining the present value we are not limited to the consideration of the amount of the actual investment."[9]

Possibly fearing that his theory of valuation could not stand the test of the courts, Mr. Plumb asserts that even present value is far less than the value set up on the books of the carriers. He testified that "the five companies on which final reports have been made and approved show an actual cost of reconstruction new of a little less than 50 per cent of the total property investment of those five roads."[10]

The annual report of the Interstate Commerce Commission dated December 1, 1919, states that fifty-three tentative valuations have been served, and final reports published as to three carriers; but there has not been fixed a single sum as the final value of the common carrier

[7] *Hearings before House Committee on H. R. 4378*, p. 605.

[8] *National Water Works Co.*, v. *K. C.*, 62 Fed. 853.

[9] *Minnesota Rate Cases*, 230 U. S. 352, p. 454.

[10] *Hearings, House Committee on Interstate Commerce, on H. R. 4378*, p. 691.

property of any of these companies.[11] What we have now are merely inventories, or reports, made by the engineering, land, and accounting sections of the Commission, of things that are to be taken into consideration in determining value.

Elements of value which have not been reported include cash on hand, securities owned, materials and supplies, as well as "going-concern value." In connection with this latter element, the Supreme Court has said: "That there is an element of value in an assembled and established plant, doing business and earning money, over one not thus advanced, is self-evident. This element of value is a property right, and should be considered in determining the value of the property, upon which the owner has a right to make a fair return when the same is privately owned although dedicated to public use."[12]

Bearing in mind that these tentative valuations omit many elements that will, it seems to me, assuredly be incorporated when the Commission fixes a single sum as the final value, what do they disclose?[13]

They have been made in respect to 25,734 miles of road, or a little less than 10 per cent of the existing mileage of the country. Forty-two of these fifty-six carriers are less than 100 miles long. Only three are more than 2000 miles in length. It may, therefore, be claimed that the evidence is too incomplete to be indicative of the real truth, but since Mr. Plumb has appealed to five roads to support his contention of a 50 per cent overcapitalization, I am appealing to fifty-six roads to refute him. Of the roads tentatively valued, the cost of reproduction new of 19,500 miles, or 75 per cent of the carriers so far reported upon, is $178,000,000 in excess of the aggregate book costs,—and the book costs, it should be remembered, are always greater than the outstanding capitalization. Included among these roads are three important systems: one located in the East, one in the South, and one in the West.

The figures for the Boston & Maine show that the cost of reproduction new of the properties embraced in its system is $67,000,000 in

[11] In addition tentative valuations have been made of three other carriers and the figures published in part. These valuations, however, have not been officially "served."

[12] *Des Moines Gas Co.* v. *Des Moines,* 238 U. S. 153, 165. *Denver* v. *Denver Union Water Co.,* 246 U. S. 178, 192.

[13] Following is a summary of the results so far reported by the Bureau of Valuation of the Interstate Commerce Commission.

1. Carriers Having a Cost of Reproduction New in Excess of the Investment Account:

Mileage	*Cost of Reproduction New*	*Investment Account*	*Excess of Reproduction Cost over Investment Account*
19,673	$868,625,080	$690,497,142	$178,137,938

2. Carriers Having an Investment Account in Excess of Cost of Reproduction New:

Mileage	*Cost of Reproduction New*	*Investment Account*	*Reproduction Cost Under Investment Account*
6,060	$222,145,808	$454,452,405	$232,306,497

excess of the par value of the capitalization. The Central of Georgia's cost of reproduction is given as $88,000,000; the investment account, $61,000,000. The Chicago, Rock Island & Pacific Railway is reported to have a cost new of $410,000,000 as of the valuation date, June 30, 1915. Since that time additions and betterments exceeding $17,000,000 have been made. As the present securities outstanding equal $345,000,000 in par value, the Rock Island is undercapitalized to the extent of $82,000,000.

These valuations, as I have already reminded you, do not include many elements of value which will add further considerable sums.

Now, turning attention to the carriers alleged to be overcapitalized,—which embrace about 6000 miles of road, or only 25 per cent of the total mileage tentatively valued,—here an excess of book cost over cost of reproduction new is reported, amounting to $232,000,000, and it was in this list that Mr. Plumb found his horrible examples. No one, so far as I am aware, has asserted that all the railroads are worth what they are capitalized for, and I am ready to admit that certain of these carriers are somewhat overcapitalized, but not to the extent of $232,000,000 or anything approaching that sum.

The Western Pacific is given as having a cost of reproduction new of $58,779,833 and a book cost of $156,318,136. In this single railroad, half of the alleged "water" is found. But the statement is made on good authority that the Commission has revised its original findings and now reports a figure for cost of reproduction which, together with subsequent capital expenditures, exceeds $90,000,000. In the meantime, the Western Pacific has been reorganized and today its capitalization is $95,000,000. Other elements of value, not here considered, are very large, including $12,000,000 of cash. Thus, instead of being overcapitalized by about $100,000,000, this railroad is undercapitalized. Many other valuations when analyzed show similar results.

Judging by the evidence which the Commission has accumulated to date, I believe the conclusion is fully warranted that the railroads are not overcapitalized. Therefore, the further conclusion is also justified that, in the event of government ownership, the amount of just compensation payable to the owners of the railway properties in the United States would be, not ten or twelve billions, but eighteen or twenty billion dollars.

It seems probable that realization of this truth prompted the following statement in the 1919 report of the Valuation Committee of the National Association of Railway and Utilities Commissioners: "All advocates of the Plumb Plan or any other form of government ownership recognizes that the value of the properties must be ascertained, and a large number of people will reserve judgment as to the wisdom of government ownership until something is known relative to the amount of money which it will take to purchase the properties."

After all, Mr. Plumb cannot be expected to take a dispassionate view of the railways. He has set out to buy the properties as cheaply

as possible and one must expect ex parte arguments. In one of his recent addresses he is reported to have said:[14]

> We have now in the liabilities of our railroad companies the indebtedness incurred generations ago. Therefore, the money expended for rails, ties, and equipment in the days of our grandfathers and long since passed out of existence, still demands its return in the present rates. Today, we are still paying for the use of locomotives long since sent to the scrap heap. We are paying returns on the shades of ties that have been ashes for generations. Rails that have been replaced half a dozen times still demand from us the earnings paid by our ancestors. The property investment account of these railroads is nothing but a whited sepulchre full of corruption and dead men's bones.

This charge is so baseless that it would not seem worth while to reply to it except that it constitutes a part of Mr. Plumb's propaganda against the values of railway properties. Under the accounting rules of the Interstate Commerce Commission, when an eighty-pound rail is worn out and is replaced by a rail of like weight, the cost of the rail is charged to operating expenses,—that is, it is paid for by the people in whose service it was worn out. Where a hundred-pound rail is put in the track in place of an eighty-pound rail, the carrier is compelled to capitalize the excess,—which amount is properly added to the property investment account, since it is obvious that a track laid with hundred-pound rail is worth more than one laid with eighty-pound.

Scientific accuracy in setting up charges for depreciation is impossible, but railroad managers know fairly well what the average life of a locomotive, for example, will be, as well as what its scrap value will be when it is no longer fit to run. The difference between the original cost and the scrap value is spread over the estimated life of the locomotive and the annual charge against operating expenses for that purpose appear in the account known as "accrued depreciation."[15]

Promises are easy to make and hard to fulfill. The American people have good reason to be wary of accepting Mr. Plumb's promises at their face value. The authors of the purchase of the railroads of Switzerland promised reductions in rates and estimated that the profits from the expected economies would suffice to extinguish the debt in sixty years. Instead, rates have advanced and the debt, instead of diminishing, has in the twenty years that have elapsed since the purchase, increased by more than 30 per cent. The Plumb plan holds forth the same rosy expectations of greater efficiency, cheaper transportation rates, diminished capital charge. These desiderata have never yet been the fruits of public operation of railways in any part of the world. In no other country are railways of the commanding importance they are in the United States. Under private ownership they have been, by and large, good and faithful servants of the people. To transfer these properties to the government is to transfer them to an agent who, judged by the unchanging behavior of human nature,

14 *Railway Age*, Nov. 19, 1919, p. 708.

15 The 1917 report of the Interstate Commerce Commission shows that $734,000,000 has been charged out for accrued depreciation, and since the carriers have been under the control of the Government, the Railroad Administration has credited them with a further $306,000,000 for the same purpose.

is not competent to assume such administrative duties. It is, in brief, to take from the man of ten talents and give to him that hath one talent. I solemnly believe the practical results of the experiment could not fail to be disastrous to the welfare of the people and the government itself.

J. M. Clark.—It may have occurred to some that the preceding speaker is criticising things which are not included in the Sims bill, since that bill does not specify any definite valuation or rate of interest, but leaves the rate of interest to the Secretary of the Treasury and the valuation to a board consisting chiefly of the Interstate Commerce Commission, subject to review by the courts. Is it pertinent, then, to criticise the plan or grounds of an unfair valuation and an impossibly low rate of interest? The key to this question has been furnished by Mr. Plumb himself in taking the ground that the "Plumb plan" consists of the whole movement in which the Sims bill is merely a first approximation, a basis for discussion, and an effective vehicle of publicity for an idea. What we have to discuss is the bill in connection with the propaganda. And if the propaganda makes claims of financial savings which the bill does not substantiate, and cannot substantiate because of economic forces and constitutional limitations, that fact is very pertinent to our judgment of the movement for which the Sims bill serves as a focus.

I have been asked to discuss this plan as an organ for the control of industry by the workers. Yesterday afternoon this Association discussed various forms of labor participation in management. Today we discuss a project which is in many fundamental ways the antithesis of those we studied in yesterday's meeting. They were plans initiated by the management: this plan is initiated by a representative of labor and sponsored by labor organizations. The one type of plan represents what managers think industry needs to improve its health and its morale, and in particular to reduce the causes of labor unrest. The other represents what labor wants, so far as that can be inferred from the fact that labor supports the program. The contrast is instructive.

The one type of plan is thoroughly evolutionary: the other is revolutionary in the sense of discarding existing organizations and entrusting their powers and duties to new bodies under a plan worked out *de novo*. In the one case the existing management shares its functions with new representative committees in such fashion that these committees get power only as they develop the will and the capacity to use it, meanwhile preserving the continuity of the managerial responsibility so that the business goes on whatever happens to the experimental parts of the new industrial state. It is a readjustment between the parties now engaged in running industry, the terms of which they work out as they go along, and one of the most characteristic things about it is the part played by groups that have no definite grant of power. The Plumb plan, on the other hand, invites the management

to step out or to stay in with the status of employees having only a minority voice in the management; puts the new experimental organs of labor representation in the ultimate seat of authority, and stakes the fortune of the industry on their success. The one is an evolving constitution for industry; the other is an invented constitution.

The invented constitution is a rare type. The United States enjoys a written constitution, but it does not represent a frame of government invented at one time. The rights and liberties it records and safeguards are the traditional rights and liberties of Englishmen, worked out under centuries of struggle and achievement under the evolving type of constitution. These were political rights and liberties, and the corresponding industrial rights and liberties have not yet gone through this process of evolutionary growth and achievement. They are still to be worked out and defined by exercise, and the capacities and habits of self-government are still to be developed and tested. The present stage of the evolving form of industrial government is much like a constitution granted at the will of a monarch; it does not grant full democracy, but it is an entering wedge, which it might not be safe to drive home at one blow.

Each type of plan would keep the active managing responsibility centralized in the executive officers, but the Plumb plan puts the representatives of labor above the executives, helping to choose them, and does not provide for direct participation by labor in the solving of executive problems. Such participation might result from putting labor representatives on the boards of directors, but it is not definitely provided for. The other type of plan gives labor managerial work to do, but preserves the independence of the managing officers. The owner of the property also retains the ultimate control of his property, and, as one of the speakers yesterday said, can go on strike at any time; while under the Plumb plan the owner of the property (now the government) gives a lease and keeps only a minority representation, while the lease can be cancelled only if its terms are specifically violated. The employees, official and classified, hold between them majority control of a property in which they do not own even the ordinary common stockholder's margin of equity.

A still more instructive contrast may be found in the specific purposes the plans are aimed to serve, so far as we can read them. The monotony and mechanical automatism of factory labor, which drive men to seek to touch substitute springs of interest and to give the cramped personality some other chance for industrial self-expression,—these play little or no part in railroading. A share and an interest in the shaping of price policy is not here an issue; that is left in the hands of the Interstate Commerce Commission. Finance, in the sense of raising capital, is relegated to the central and local governments. Apparently, labor is moved by no overwhelming desire to share the industrial function of furnishing productive equipment. Sales promotion might or might not figure largely. There remain as possible motives the desire for a creative share in production policy, the desire

for a share in the profits as a means of giving effect to the laborer's interest in production, and the simple desire for larger income for its own sake. Mr. Plumb has said that labor wants the plan because it is in harmony with American institutions, and that is probably the case. But it is also true that labor wants the plan because it has been told that it will solve the endless futile spiral of rising wages and rising costs of living and give at the same time lower freight rates and higher earnings to labor. This result is to come, primarily, by absorbing to labor the margin of profit that now goes to private enterprise and, secondarily, by increased efficiency. Which of these motives is the most important?

Such a question is difficult to answer, but it is my impression, from what I have seen of the Plumb plan literature, that the desire for financial gains is uppermost and that increased efficiency and industrial democracy are not so much independent objects of the movement as arguments by which to justify the absorbing of the profits. This is perfectly natural and legitimate. It means simply that labor's motives are like those of the business man. What he typically wants is to make money, and efficiency is a means to that end. The issue comes down, then, to a comparison of the two systems from the point of view of the likelihood of making good the hope of profits, and the relative effectiveness of the machinery for harnessing the desire for gain so that it shall be pursued by means of service rather than by means of graft or exploitation, assuming that the motives and temptations we have to deal with are substantially the same in either case.

When the business man offers the public a service in exchange for profits, he submits to a continuous competitive test and takes chances of loss in case he does not make good his pretensions. I do not see that labor in this plan submits to any corresponding test or takes any corresponding chances. Its claim of efficiency has merely to be made sufficiently convincing in advance to get the votes needed to pass the law, after which it will be well-nigh impossible to draw back. The private manager, on the other hand, must continue to make good in the face of a test that acts all the time and not merely at election time. The test consists of railroad competition, market competition, and the readiness of rival interests to collect sufficient stocks or proxies to oust him from control. If another strong financial interest thinks it can make the stock worth more than it is worth under the existing management, it outbids the market for it and control changes hands without needing an act of Congress. Under the Plumb plan, directors are elected for a ten-year term, or five years in the case of the regional boards, and stand for reëlection in rotation so that it takes five or ten years, as the case may be, to change the whole board. Added to this is the power of recall. This machinery is distinctly less mobile than the corresponding machinery in a private corporation. Moreover, the remnants of railroad competition are a potent force to set limits on corruption and inefficiency, and these the Plumb plan would abolish.

Another serious question arises out of the fact that salaries and

wages are to be fixed by the employees, sitting in a joint board of which one half represents wage earners and one half salaried officials. Even the rate-making power of the Interstate Commerce Commission, under the rule just announced by Mr. Plumb,[1] would be forced to accept the costs of operation including wages and salaries as fixed by this board. In predicting how this board will work there is one simple arithmetical principle of much importance. Suppose there is a margin that can be used either to increase wages and salaries or to declare profits. Out of any sum that goes to wages and salaries the employees get the whole; out of any amount that goes to profit they get half. My arithmetical studies were before the days of the present popularity of non-Euclidean mathematics or the unsettling revelations of Einstein as to the unreliability of ordinary ideas of size, but I distinctly recollect that the whole of anything was considered greater than any of its parts.

We must remember that this same mathematical principle applies also to private management, whenever an official or director has personal dealings with his own corporation. Mr. Plumb rightly objects to the practice of railroad managers holding stock in companies producing railroad supplies and equipment.[2] It may be pointed out, however, that this abuse is equally possible under the Plumb plan; that existing laws are already attacking it and that the Plumb plan adds no further safeguards; while it extends the same opportunity, with full official sanction and no safeguards at all, to the whole field of wages and salaries, which bulk vastly larger than the purchase of supplies, great as that business is. Moreover, in the private corporation there is always one interest which can gain only through its share in the profits, namely, that of the stockholder who is not a director or managing official. His pocketbook urges him to prevent this type of exploitation by all means in his power. Under the Plumb plan there is nobody in this position except the voters of the country at large, whose interest is too dilute and whose voice is too indirect to guarantee the bringing of effective pressure as compared with the pressure, imperfect though it may be, which private stockholders can exert. This weakness is inherent in the situation apart from the fact that in the present draft of the plan the public is not even represented on the wage and salary boards.

The fundamental governing body is the tripartite board of directors, on which the three interests which Mr. Plumb has named are unevenly represented. Property and the public between them have one third and employees, divided into official and classified, have two thirds. In the regional boards the public has no direct representation, but one third of the members of these boards are chosen by the central board. In this scheme there are only two independent constituencies, labor

1 This rule is not contained in the Sims bill, which merely perpetuates the present powers of the commission.

2 This paragraph, and the preceding one, were not in the original discussion, but are inserted under "leave to print." Mr. Plumb introduced this point in his final summing up at the end of the discussions.

and the public. The managing officials are chosen by the board on which their representatives sit. Whom will they represent? Will they act in common with the classified employees? If so, the plan might merely substitute a new form of class exploitation for the old, with a different exploiting class and less effective safeguards. I have been assured by some that the two groups would find their interests in common and act accordingly. No one can prophesy with any certainty, but as long as there is any considerable probability that it would work in this way, it is hardly wise to stake the future of the entire railroad industry on the outcome.

In conclusion, the plan has two unfortunate features: first, it is plunge, and second, it is bound up with mistaken hopes of big gains that have about them the color of "something for nothing." As to the first feature, the logic of the situation justifies a plunge if conditions are so intolerable that we have not much to lose. The case of our railroads is not yet as bad as that. We have a pretty efficient railroad system, and while troubles will always be with us and we shall never solve them, we shall keep on wrestling with them and forcing them from one shape into another. Despite all abuses, we have a great deal to lose, and it is far safer as a first step to adopt some plan for minority representation of labor rather than to jump at once to a complete system of government ownership and employees' operation.

I am a conservative individualist. I think laborers ought to own and manage their own industries as soon and to as great an extent as they develop the interest and the capacity for so doing, and I think we should try experiments in this direction without delay. I should, however, be slow to agree that our goal should be a system under which employees control property which they do not own and toward which they have furnished none of the funds. A workable constitution for industry must be an achievement, not a gift. The situation calls for experiments, not plunges.

As for the rosy financial predictions which play such a large part in the propaganda for this plan, they disappear upon analysis. There is no reason to suppose that the valuation under the Plumb plan would be different from that which we shall have in any case from the same agencies, namely, the Interstate Commerce Commission and the Supreme Court. The government may raise funds cheaper than private enterprise, but the sinking fund of 1 per cent will approximately neutralize the difference, so far as gains for the near future are concerned, while the history of public improvements offers no guarantee that ultimate capital charges will be lighter, even with the sinking fund. Taxes are not mentioned in the plan, but if the states are deprived of the $200,000,000 of revenue they secure from this source, that amount will have to be made up elsewhere and cannot be counted as a net gain. Increases in efficiency of operation are problematical and there will be losses to balance them. This exhausts the list of possible sources of gain.

One of the most unfortunate results of basing the propaganda on

large promises of profits lies in making it quite impossible to tell how much of the support of the Plumb plan springs from a general desire for representative government in industry for its own sake and for the sake of the benefits which it can reasonably be expected to afford. These benefits lie in the possibility of a juster organization of interests, incentives, and responsibilities in industry, not in financial gains. If labor wants these benefits, some way should be found to grant them. But if you offer a man a charter of representative government and at the same time tell him that it will make him rich, you cannot tell whether his vote means anything more than that he approves of the idea of getting rich. Such a vote would furnish no adequate proof that the people want such an industrial government for its own sake, and no reliable backing on which to meet the practical difficulties, reverses, and disappointments which the working out of any such scheme necessarily entails. The fact that laborers want the profits of management is no valid reason for giving them the management of a business where there are no profits to take.

Nevertheless we owe Mr. Plumb a vote of thanks for opening up this subject so forcibly and for contributing so effectively to the popular realization that what is needed at the present time is not mere adjustments of wages, hours, and working conditions, but genuine constitution-making for American industry.

C. O. Ruggles.—In framing a program of railway regulation there are four different groups which should receive consideration. To name them in an order convenient for this discussion, they are: (1) the classified employee; (2) the railroad managers; (3) those who furnish railroad capital; (4) the public.

An outstanding feature of the Plumb plan is that an additional incentive above wages in the form of a labor dividend is deemed necessary in order to secure the best results from labor. This is undoubtedly true, but there does not appear to be anything to prevent the classified employees and the railroad managers, who together are to have two thirds of the members of the board of directors, from using the surplus revenue of any year to advance their wages and salaries. If they follow this course they will have more to gain than they would by accepting a labor dividend. If they increase their wages it enters the accounts in all subsequent years as a part of operating expenses, and since all deficits in operation are to be met by the government, they would continue to receive remuneration during lean years in accordance with the scale set by them when a surplus is available. Mr. Plumb will probably reply that this will not happen, because the plan as drawn gives a larger relative share of the labor divided to the railroad managers than it does to the classified employees, and it would therefore be to the interest of the five directors representing the railroad managers to vote with the five government directors for the labor dividend rather than for a wage increase. But this does not seem to be conclusive. Managers would probably find it to their interest in the long run to vote with the classified employees for an in-

crease in their salaries, which would be a certain return for succeeding years, rather than vote themselves a larger share in the form of a labor dividend, which would be contingent. Moreover, if it is sound reasoning that an additional incentive is needed to induce laborers to render efficient service, it also implies that a hope of reward might bring about a more efficient use of capital. While it may be desirable to give owners of capital some incentive to use it efficiently, we have undoubtedly reached the stage where we will refuse to permit earnings beyond a limited amount to investments in railroads and public utilities. Under such circumstances fairness would dictate that capital so invested should be protected to a certain extent against losses. If men make 30 to 50 per cent in certain lines of business for a series of years, and we permit them to retain these high profits, it is not necessary for the government to concern itself about the financial welfare of these businesses during a period of lean years.

Unfortunately some persons still classify the railroads with the ordinary business. When the carriers came back to the Interstate Commerce Commission after the outbreak of the war, and asked them to reconsider the rate advance which the Commission had refused some months previous, the counsel for the railroads contended that because the European governments were in the market with large offerings of government securities it was impossible for the railroads to secure capital except at advanced rates, and that on that account the railroads should be allowed an increase in rates. In reply to this contention it was urged by some that other lines of business were also finding it more difficult to borrow capital and that there was no reason why the railroads should be singled out for special consideration. This reasoning appears to overlook the fact that if it is fair to the public that railroad rates be reduced when the conditions of railroad revenue warrant such action it would be fair to the railroads to have rates increased if such action became necessary to produce adequate revenue. But there are limits in both directions within which earnings on capital invested in railroads ought to be permitted to fluctuate. To repeat, if incentive is essential to secure efficient laborers it would doubtless be of advantage to the public to allow some margin for efficiency in the use of capital.

On the other hand it is clear that the fear of loss of revenue would also be of some significance, and that there should be therefore no fixed or guaranteed return to capital. It would doubtless be sufficient to have a rule of rate making that would provide for rate increases when it could be shown that such were necessary to prevent substantial loss to the capital invested in the railroads. Within a zone of variation in earnings thus permitted there would be opportunity for private initiative. Certainly it is necessary to eliminate speculative activity from the field of railroad finance. Unusual profits cannot be permitted, and if large profits are not permitted some protection against large losses is necessary. If this drives from the field of railroad investment that type of financier who desires fabulous margins, so much the better. If capital invested in railroads is given a reasonable margin

in which to work out its earning power there will be those ready to offer it for investment. With a zone within which railroad earnings might be permitted to fluctuate, owners of the capital invested in the roads might be in a position to exercise a wholesome influence upon the character of the services of both railroad managers and classified employees. It is not at all probable that such would be done under a plan whereby the government would furnish the capital and have a certain representation on the board of directors. If both railroad managers and classified employees realized that their shortcomings were to be registered against them, it would doubtless have as wholesome an influence upon their efficiency as would the hope of gains beyond their wages in the form of a labor dividend. It is very doubtful if a board of directors, two thirds of which would represent the managers and classified employees, would have the independence which would be necessary to exercise such wholesome discipline. It would not appear to be in the interest of the railway employees, in the long run, to urge a plan by which they would be judges of their own case.

Mr. Plumb has emphasized the fact that millions of people are ready to accept his plan. The willingness of many to accept the Plumb plan, or in fact any plan which would promise improvement, is not difficult to explain. Obviously it would be impossible in the time alloted to do more than mention one or two of the outstanding shortcomings of our previous regulation which have been in a large measure responsible for the present convictions of many persons that there is need for a drastic program of railroad control. Many of the charges which Mr. Plumb has made may be traced to the lack of financial control of carriers and to the absence of adequate regulation of railway service. No one will deny that our railroad managers and those responsible for the financial program of our railroads have been guilty of appropriating to themselves what has rightfully belonged to the consumers of transportation. But it would not appear that the solution for this difficulty is the adoption of a plan which eliminates all profit, but rather a plan whereby those who are responsible for efficiency of railway management and for honesty in the financial affairs of carriers should be held to a strict accountability. Mr. Plumb's plan really proposes to continue the lack of strict accountability to the public by creating a board of directors two thirds of which are controlled by the railroad managers and the classified employees themselves.

Lack of regulation of railway service in this country has been responsible for much dissatisfaction in recent years and for many of the plans for railroad regulation which have been proposed to Congress within the last eighteen months. Any plan which furnishes proper regulation of railway service must provide, first, for satisfactory relations between the railroads and the governing authorities, that is, the various state governments and the federal government; second, for relations between the railroads and the shippers; and third, for the relations of the railroads to each other. Time will not permit of a discussion of these phases of this important subject, but one feature of in-

terest in connection with all of them may be given brief consideraiton.

The theory which has been embodied in our previous railway legislation is that carriers should not be permitted to consolidate. Surely from the standpoint of the public there is need of much more coördination of transportation in the future than has obtained in the past. Let us consider for a moment the conditions in most of our important terminals, especially in those that are also important ports. Railroad ownership or control of strategic terminal facilities is the natural outcome of competition among railroads. It has had three unfortunate results. In the first place, it has resulted in much duplication of expensive terminal facilities without proper provision for their physical coördination. Such a policy has meant, for example, the purchase of much land or water frontage in anticipation of needs. Through such a policy we have at present railroad domination of the New Jersey side of New York harbor. Railroad rivalry has prevented the establishment of reciprocal switching arrangements and joint terminal operations on the New Jersey shore.

The second unsatisfactory result of railroad competition in our important ports has been the giving by the railroads of what in some cases are gratuitous services to shippers in order to obtain traffic. Testimony was given before the Interstate Commerce Commission in 1912 to the effect that lighterage and other terminal services at the port of New York cost the Baltimore and Ohio Railroad more than the allowance it received for those services out of joint rates; that on this account that railroad had a deficit on its terminal services at New York for the years 1909 to 1911 of more than $1,250,000. In the decision of the so-called 5-per-cent case the Interstate Commerce Commission pointed out that there were many special services in terminals being rendered by carriers to shippers for which no special charge or a non-compensatory charge was being made; that answers filed by carriers showed large amounts were thus absorbed in railroad rates. Examination of terminal tariffs shows that in some instances terminal charges are in addition to the line haul and that in others they are absorbed upon traffic coming from competitive points or upon those shipments for which the railroad receives a certain minimum revenue.

The third unsatisfactory result of railroad competition is the lack of physical coördination in our ports between rail and water carriers. It is a common provision in terminal tariffs, for example, that a railroad does not obligate itself to provide wharfage, storage, or handling for traffic which has not been transported or is not intended to be transported over its line, or that it reserves the absolute right to the use of its "piers or docks" and that "permission for their use must be procured." In actual practice this frequently means the refusal of one railroad to permit the use of its port terminal facilities by other roads unless it receives a line haul of the traffic. The refusal of railroad A to accept freight in switch movement from Railroad B if it is to be exported from the piers of Railroad A means that Railroad B is compelled to lighter the cargo to the vessel at the piers of railroad A, or that the vessel must shift to the piers of railroad B after taking on

its cargo at the piers of railroad A. Conversely, if part of the cargo of a vessel is destined to points not located on the line of the railroad at whose piers the vessel docks, this cargo must be lightered to the piers of the railroad over which it is to be carried, or the vessel must shift in order to discharge the cargo at the piers of the road which is to have the line haul. Such practice makes as many separate ports within a port as there are deep-water terminals controlled by the different railroad companies. It often means, too, that there is congestion at the water terminals of some railroads while others are not used to capacity. This inefficiency in terminal services means an imperfect coördination of rail and water carriers which in turn makes embargoes upon traffic necessary. The effects of these embargoes extend into the interior to Kansas City and beyond. Obviously the restriction of strategic port terminal facilities to its own use is an attempt by a railroad to secure the line haul of the traffic. While this is a failure to appreciate the fact that railroads are common carriers it is the natural result of railway competition in terminals. But if it is true that competition has made terminal charges so low that they are unremunerative, a railroad which has expensive rail and water terminals could not afford to permit their use by other railroads unless it were to receive more for their use than the present scale of terminal charges would yield.

In view of these facts it would not be wise to have the provisions of the Esch bill, which has recently passed the House of Representatives, enacted into law. Mere permission to carriers to consolidate will not be sufficient in cases where certain railroads enjoy strategic positions in our terminals. It is not reasonable to expect that such railroads will voluntarily offer to share their monopoly profits with other carriers. This does not mean government ownership of terminal railway facilities. There could be organized separate terminal companies, the control of which would be shared by all the railroads in the terminal. Take, for example, the situation in Norfolk, Virginia. There the eight railroads themselves own a terminal belt line which does the switching and belt line service for them all. They each own 12.5 per cent of the stock of this terminal company, and all receive services from it on an equal basis. This service, however, does not extend to much of the traffic which constitutes exports and imports. There is as much logic in compelling one carrier to permit the use of its terminal facilities by another carrier as there is in compelling one utility to permit the use of its poles, conduits, or other facilities by another utility. In both cases the public receives consideration as an important third party to the contract. The theory in the decision of the Supreme Court in the *St. Louis Terminal Case* in 1912 ought to be more generally applied. It would appear therefore to be in the interest of the public to have those provisions of the Cummins bill which provide for compulsory consolidation enacted into law, at least so far as our important terminals are concerned. If railway legislation can be enacted which among other things will provide adequate financial control of carriers and more efficient railway service it will do much to remove

the present demand for such a radical program as is proposed by Mr. Plumb.

What has been said is not in opposition to a plan for participation in railway management on the part of railway employees. That would doubtless have many beneficial results. But the employees will certainly take much more interest in the management of the carriers if they gradually buy a share in them, and face the probability of loss in case the properties are not efficiently managed.

R. R. BOWKER.—Here is indeed an almost humorous reversal. The American Economic Association is considered by labor an organization of theorists, idealists, doctrinaires. But now a representative of labor presents his idealist's plan, from which the underpinning is knocked away by the hard facts brought forward by professorial and commercial economists. Mr. Plumb has presented a masterly and remarkably compact statement of the Plumb plan, or plunge, and makes the assumption usual in all socialist arguments, which presume that any defects of present systems are readily curable by the panacea of the moment, and throws the burden of proof not upon the advocates of a new plan but upon the defenders of existing methods. He also makes the assumption that a single class of workers constitutes the people, whose interests are to be protected by putting into the hands of railway employees the control, direct or indirect, of the entire railway system. Most of us agree that labor is entitled not only to an advance corresponding to the higher cost of living, but, in the words of the remarkable and creditable document issued by labor leaders from Washington, to a progressively advancing scale of wages in respect to share of product. But the willingness of representatives of labor to throttle the industries of the country by wholesale stoppage of transportation does not give assurance that the interests of the public will be safeguarded under their control. While transportation is vitally essential to the business of the entire people, it is perhaps not so large an element in the increased cost of living as has been supposed.

From 1913 through June, 1916, bituminous coal could be bought at the pit-mouth at from $1.15 to $1.50 per ton, while cost of transportation to a factory near New York remained, under Interstate Commerce restrictions, $1.75 per ton. The price at the pit-mouth rose suddenly within the succeeding year to the climax of $5.75 in June, and, under government restrictions, fell to $3.25 in July, 1917, and the price this year has fallen to $2.65. Meanwhile, transportation charges rose to a maximum of $2.30, or only 30 per cent in all, though coal had risen, previous to government control, 400 per cent, and is at present more than double pre-war prices. That labor should have its share in any such advance is beyond question. But we cannot assume that justice either to labor or to the whole body of consumers will be reached, despite the difficulties of the pre-war railway management which we all recognize, by so radical an overturning as the Plumb plan proposes.